

**TECHNOLOGY COORDINATION OFFICE**  
**Review and Opinion Regarding the Proposed**  
**Phase II Network Upgrades and Switch Refresh Project**  
**Oct. 20, 2008**

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**COST SUMMARY:** **CIP**

**FY 2009 – Phase II**  
**Network Switch Refresh** **\$818,249.20\*\***

FY 2009 Budget Impact  
**Budgeted?** **Yes**

**\*\*NOTE:** Phase II costs of \$114,612.50 were included in the June '08 Phase I approval, resulting in a total Phase II cost of \$932,861.70. *(This project addresses the end-of-life issues with the core networking infrastructure and CIT does not foresee any additional related purchases in this area in the next 36 months).*

**VENDOR:** Coleman Technologies, Inc.

**OVERVIEW:**

Central Information Technology implemented the current Cisco network switch infrastructure in 2001 to support the information needs of Shelby County Government. The Cisco core and distribution switch equipment in this implementation has reached end-of-life and will reach end-of-support in March, 2010. This equipment serves to support the technological backbone for the SCG network infrastructure. As more of the services provided by SCG become ingrained with technology and as more critical functions depend on the optimum performance of this network, the more important it becomes to keep this network up-to-date and performing with near perfection. The hardware and software acquisitions listed above for FY2009 are to purchase and implement the replacement of the 160 N. Main, 201 Poplar, 150 Washington, 600 Adams, Corrections Center, Remote Computer Site (Haley Rd.) distribution blocks and the 201 and 160 core network equipment. Phase I of this project in the amount of \$310,914 was approved by the commission on June 16, 2008. The TCO opinion for Phase I noted the predicted total project costs at that time to include the Phase II estimates and indicated the Phase II request would be submitted early in FY2009.

**Phase II Network Switch Replacement/Refresh:** Since the completion of the infrastructure recommendation phase of the County Technology Plan being undertaken by the TCO is not scheduled until the middle of fiscal year 2009, the TCO discussed with Central IT the need to keep the network core switch replacement to the minimum necessary until this plan is complete. However, the TCO does agree with Central IT that, in order to maintain the integrity of service to its SCG customers and mitigate the risk of a catastrophic failure due to loss of support of the end of life Cisco switches, the switches will need replacement.

**OPINION: RECOMMENDED**

**Stated Business Need**

With the obsolescence of any county assets come increased expenses for maintenance and support. Network equipment is no different. As applications and users require more capacity to support SCG functions and as technology advances, hardware and software changes are warranted. The intent of this request is to upgrade to current standards that support emerging technologies and to insure no lapse in our maintenance coverage while keeping expenditures within the norm for infrastructures of this size and complexity. This positions CIT with the required equipment in the life cycle that would negate replacement for the foreseeable future. The value-add for this upgrade is additional proactive analytical monitoring capability at the critical layers in the infrastructure that will ensure an enhanced end-user experience. This request also provides the CIT staff with the capabilities to better service their customers and commit to agreed-upon SLAs. It is anticipated that completion of Phase II will occur in late 2009.

**This investment is largely justified on strategic grounds. In the past fifteen to twenty years, both public and private enterprises have achieved cost reductions and other efficiencies by investing in various forms of network integration. Should Shelby County pursue a similar path, as is likely, the added capacity and robustness of the proposed switch replacement and upgrade will be essential.**

#### **Value for the Financial Outlay**

Infrastructure hardware and software is expensive. Three responses to the RFP were received and Coleman Technologies submitted the lowest total cost response to both the Phase I and Phase II proposals while meeting the specifications of the RFP. The Phase II replacement of the core network switches, as well as the Phase I enhancements, are not cost saving technology investments per se, but instead are necessary risk mitigation expenditures which could avoid significant financial and productivity losses should a network switch failure occur in the event these investments are not undertaken.

From a maintenance standpoint, if the existing equipment goes out of support, CIT would need to identify sources for aftermarket parts. Considering the sheer number of components and complexity of the systems in question, CIT would thus need to purchase and ensure quality control on thousands of dollars in parts inventory. CIT would need to manage and rotate this inventory based on changes in network topology and would be at risk of absorbing the cost of non-factory certified aftermarket parts.

CIT would also be locked into current equipment software releases, without the ability to upgrade or enhance their capabilities and this would also be without manufacturer support.

#### **Due Diligence**

The CIT group believes that the selected vendor will provide high level service to install the hardware and software with the result that the current uptime CIT's customers have become accustomed to receiving will continue. Implementation risks are minimal but will be documented for appropriate management and mitigation. TCO participated in many meetings and discussions with CIT to ensure the soundness and thoroughness of this request.

#### **Strategic Fit**

The proposed Phase II core network switch replacements are an unavoidable cost of doing business. The TCO and Central IT worked together to ensure that the proposed network refresh in Phase II will be compatible with the Shelby County's Long Term Technology Plan.

#### **Information Security Considerations**

The CIT group is responsible for ensuring the adequacy of security provisions on the County's network. The changes proposed in this project will not significantly alter the risks to confidentiality and integrity faced by the County, although they will go some way towards enhancing availability and flexibility of the underlying infrastructure. Nonetheless, care and testing will be needed during the implementation to ensure that the changes do not have unintended negative impacts as a result of misconfiguration or miscommunication with vendors.

Lee Miller  
For the Technology Coordination Office